



UNITED STATES PATENT AND TRADEMARK OFFICE

vn

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,988	03/19/2002	Atsuo Hattori	T2171.0201/P201	5657

24998 7590 05/20/2003

DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP
2101 L STREET NW
WASHINGTON, DC 20037-1526

EXAMINER

NGUYEN, KHIEM D

ART UNIT	PAPER NUMBER
----------	--------------

2823

DATE MAILED: 05/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/099,988

Applicant(s)

HATTORI ET AL.

Examiner

Khiem D Nguyen

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 3-6 and 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7-10 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1, 2, 7-10 and 17 in Paper No. 5 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 7-8 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Nobushi et al. (JP 8-15318).

Nobushi discloses a method of manufacturing a probe unit, the method comprising:

depositing a plurality of parallel, elongated leads 3 on the contiguous flat surfaces of a substrate 2 and a sacrificial layer 3', the leads extending over both portions of the substrate and portions of the sacrificial layer wherein forming the sacrificial layer in the substrate before the depositing step (Abstract and FIGS. 8-9);

removing the sacrificial layer so that the leads include a supported portion located on the substrate and an unsupported portion extending over at least one edge of the substrate (FIG. 9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al. (U.S. Patent 6,335,522) in view of Nobushi et al. (JP 8-15318).

Shimada discloses a method of manufacturing a probe unit having leads whose front portions extending beyond an edge of a substrate, the method comprising the steps of (See col. 8, line 11 to col. 10, line 51 and FIGS. 3A-7E):

forming a recess 25 in a surface layer of a substrate 1 (col. 8, lines 11-39 and FIG. 3A-B);

filling a sacrificial layer (27, 35) in the recess wherein the sacrificial layer is made of metal, resin or inorganic material (col. 10, lines 13-44 and FIG. 6B-C);

forming a number of leads 6 on the surface of the substrate, the leads being disposed in parallel and extending into an area of the sacrificial layer (col. 10, lines 38-44 and FIG. 6D); and,

removing the sacrificial layer (FIG. 7E).

Shimada fails to explicitly disclose forming a cut extending from a bottom surface of the substrate into the sacrificial layer as recited in present claim 1.

Nobushi discloses forming a number of leads 4 on the surface of the substrate 2, the leads being disposed in parallel and extending into an area of the sacrificial layer 3' and forming a cut 12 extending from a bottom surface of the substrate into the sacrificial layer and removing the sacrificial layer (Abstract and FIGS. 8-9). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Shimada and Nobushi to enable a cut extending from a bottom surface of the substrate into the sacrificial layer of Shimada to be formed and furthermore to obtain a probe unit provided with resilient contact piece (Abstract).

3. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nobushi et al. (JP 8-15318) as applied to claim 7-8 above, and further in view of Shimada et al. (U.S. Patent 6,335,522).

Nobushi fails to explicitly disclose forming a depression in the substrate and forming the sacrificial layer in the depression and removing a portion of the substrate located below the depression as recited in present claims 9-10.

Shimada discloses forming a depression 25 in the substrate 1 (col. 8, lines 11-39 and FIG. 3A-B) and forming the sacrificial layer (27, 35) (col. 10, lines 13-44 and FIG. 6B-C) in the depression and removing a portion of the substrate located below the depression (FIG. 7E). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Nobushi and Shimada to enable a depression in the substrate of Nobushi to be formed and furthermore to obtain a probed, which is simple and provides a good reproducibility and a high processing precision (col. 2, lines 59-64).

Art Unit: 2823


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khiem D Nguyen whose telephone number is (703) 306-0210. The examiner can normally be reached on Monday-Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chaudhuri Olik can be reached on (703) 306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9179 for regular communications and (703) 746-9179 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

K.N.
May 14, 2003


Olik Chaudhuri
Supervisory Patent Examiner
Technology Center 2800